



SCRIBE

Video Text Generator

Advanced Font Create Utility

Operator Manual



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Section 1

Introduction

1.1 General

The Advanced Font Create Utility is a group of programs that include software for word compose, 3D modeling, texture mapping, and font conversion.

The function of the word compose utility is to combine characters or logos from various master fonts to form words for later conversion. Characters used may be scaled, repositioned, sheared, or rotated as desired. The output of the Word Compose utility is a master word description file that can be used as the master font during the Font Create process to produce a loadable machine font.

The function of the 3D Modeling program is to define a particular orientation of a font, word or logo in 3D. A light direction can also be defined and adjusted. The output of the 3D modeling program is a 3D description file that can be applied to a font or word during the font create process to create a loadable machine font. A font may contain characters or logos as separate entities. A word may contain characters and/or logos as one entity to be displayed by one keystroke. 3D objects used in Message Compose must be used in conjunction with a properly configured subpalette. Paragraph 6.5 describes how to load subpalettes for operation with 3D objects.

Textures are supplied by CHYRON on separate disks. These textures can be mapped on to any font, word, or logo during the font create process.

The Advanced Font Create Utility is menu-driven, and is initiated by the selection of Advanced Font Create Utility from the SCRIBE Loading Menu.

NOTE

Be sure to test any font or word with 3D or Texture options as a roll or crawl message before using it on air.

1.2 Organization

This handbook is organized into sections, as described below:

Section 2, Setup and Initial Operation, contains software installation instructions and procedures for getting started with Advanced Font Create.

Section 3, Advanced Font Create Functional Overview, describes all Advanced Font Create Utility functions from a software standpoint.

Section 4, Conversion Functions, describes how to use the conversion functions of Advanced Font Create Utility. These functions include Edit Character Placement Table, Edit Conversion List, and Start Conversion Process.

Section 5, Word Compose, describes how to combine characters or logos from various master fonts to form words for later conversion.

Section 6, 3D Modeling Functions, describes how to specify the 3D positioning and lighting of any font, word or logo. Position is specified using a wire-frame model, and lighting is specified using a representation of an object with an adjustable light source. Light brightness, ambient light, and "shine" adjustments are also described.

Section 7, Texture Functions, describes the texture functions and all aspects of using textures for fonts or words.

Section 8, Conversion Error Log, describes the Conversion Error Log, and how to retrieve results after a conversion.

Appendix A, Error Responses, is a listing of all error responses that may occur during operation, along with descriptions and recoveries.

1.3 How To Use This Handbook

This handbook is best used as follows: Once the Advanced Font Create Utility has been properly loaded into your system, sit down and spend some time with Word Compose and 3D Modeling (Sections 5 and 6) to become comfortable with their operation. Then, try to convert several samples (covered in Section 4) to become familiar with normal operating procedures.

1.4 Using Disk Utility With Textures, 3D Model Files, and Word Files

When using the disk utility for copying or deleting Texture, 3D, or Word files, the following file arrangement is used by the system and must be observed in the Disk Utility program:

- ▶ Texture files are stored in the Master Font directory starting at ID 10000. Therefore, if you want to copy Texture file 100 from one disk to another, you must specify file ID 10100 in the Copy Master Font menu.
- ▶ Word files are stored in the Machine Font directory starting at ID 11000. Therefore, if you want to copy Word file 100 from one disk to another, you must specify file ID 11100 in the Copy Machine Font menu.
- ▶ 3D Model files are stored in the Machine Font directory starting at ID 16000. Therefore, if you want to copy 3D Model file 100 from one disk to another, you must specify file ID 16100 in the Copy Machine Font menu.

Section 2

Setup and Initial Operation

2.1 General

This section describes how to install the Advanced Font Create Utility software into your SCRIBE system, and also how to get started using the software.

There are no special tools required for this installation.

2.2 Software Installation

Software for the Advanced Font Create Utility is contained on one 5¼-inch floppy disk. For your reference, we have reproduced the disk label below, in Figure 2-1. The SCRIBE part number for the Advanced Font Create Utility software is 3M0-2400, and the software is specially created to work on only your SCRIBE system. Other disks (containing textures) may have been included with the Advanced Font Create Utility, if they were ordered.

The software package consists of ten programs:

- Advanced Font Create
- BMPU MAP2
- BMPU WCS2
- 3D-Edit
- 3D-Render
- Texture
- Word Compose
- Linear Shading
- Wave Shading
- Refractive Shading

When loading the software, be sure to load all ten programs by using the "Copy Directory" function (described below).

The software on this disk should be copied onto the system's hard disk (Drive #0) for normal operation, and the floppy disk software should be reserved as a backup. (If your system uses a floppy disk as its boot disk, copy the Advanced Font Create Utility software there instead. ***It is important to always have a backup of any important program!***) The copy operation may be performed through the Disk Utility program, which is described in Part IV, Section 1 of the SCRIBE Operator's Manual. The pertinent copy procedure is listed below.

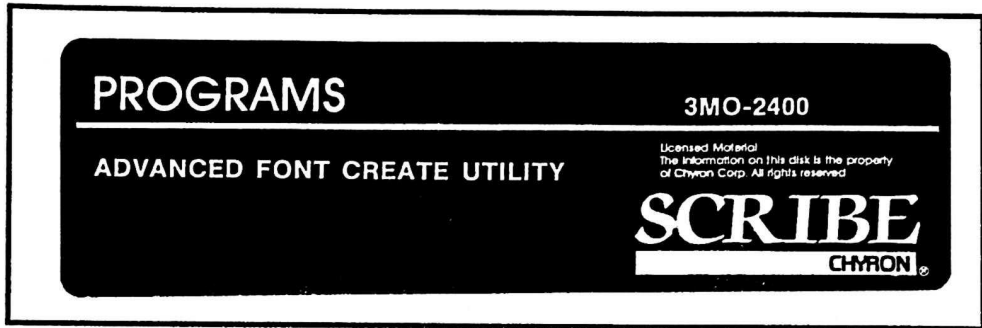


Figure 2-1. Advanced Font Create Utility Software Disk Label

To copy the software onto the hard disk (Drive #0), follow this procedure:

- Step 1: From the SCRIBE Loading Menu (Figure 2-2), select "D" for Disk Utility. The system will respond with the SCRIBE Disk Utility Functions menu, Figure 2-3.

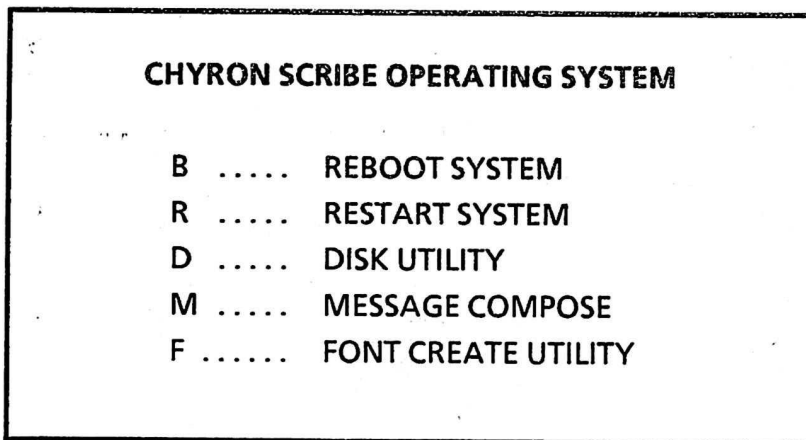


Figure 2-2. SCRIBE Loading Menu

SCRIBE DISK UTILITY FUNCTIONS

- [1] COPY
- [2] RENAME
- [3] DELETE
- [4] DISPLAY
- [5] MODIFY DRIVE CONFIGURATION
TABLE
- [6] FORMAT & INITIALIZE

SELECT FUNCTION [1 - 6]

Figure 2-3. SCRIBE Disk Utility Functions Menu

Step 2: From the Functions menu, select [1], COPY. The system will respond with the Copy Menu (Figure 2-4):

1. COPY

[1] COPY DIRECTORY

[2] COPY FILE

SELECT FUNCTION [1 - 2]

Figure 2-4. SCRIBE Copy Menu

Step 3: From the Copy Menu, select [1], COPY DIRECTORY. The system will respond with Figure 2-5, Copy Directory menu:

1. COPY

1. COPY DIRECTORY

[1] SYSTEM PROGRAM DIRECTORY

[2] MASTER FONTS DIRECTORY

[3] MACHINE FONTS DIRECTORY

[4] MESSAGE DIRECTORY

[5] MESSAGE DIRECTORY WITH FONTS

[6] DRIVE CONFIGURATION TABLE

[7] SYSTEM ERROR LOG DIRECTORY

SELECT DIRECTORY [1 - 7]:

Figure 2-5. SCRIBE Copy Directory Menu

- Step 4: From the Copy Directory menu, select [1], SYSTEM PROGRAM DIRECTORY. The system will respond with the Copy System Program Directory menu, Figure 2-6:
- Step 5: Using the Cursor Direction keys on the SCRIBE keyboard, position the cursor on the FROM DRIVE: field. Enter the number that corresponds to the disk drive containing the Advanced Font Create Utility disk. After you've filled in this field, the cursor moves to the next field automatically.
- Step 6: At the TO DRIVE: field, enter a number corresponding to the hard disk drive (usually, this is Drive #0). This will cause the contents of the Advanced Font Create Utility disk to copy onto the hard disk.
- Step 7: To prevent overwriting on the hard disk, the prompt REPLACE: N is displayed on this menu. The N in this field tells the system to prevent overwriting by prompting whether duplicate files can be replaced. If you enter Y in this field, the system will

1.	COPY
1.	COPY DIRECTORY
1.	SYSTEM PROGRAM DIRECTORY
FROM DRIVE:	
TO DRIVE:	
REPLACE: N	
ENTER FIELDS - THEN PRESS NEW LINE TO BEGIN COPY	

Figure 2-6. SCRIBE System Program Directory Menu

replace any "obstructing" data on the hard disk without prompting first.

Step 8: Once you've filled out the Copy System Program Directory menu, press the NEW LINE (↵) key. The copy process will begin. After copy is completed, remove the Advanced Font Create Utility floppy disk, and store it in its sleeve in a cool, dry place.

2.3 Texture Installation

The textures available for Advanced Font Create Utility are supplied on one 5¼-inch floppy disk per texture. Since the texture files are approximately 700 kilobytes each, it is advisable to leave them on floppy disk and not needlessly fill up space on the system's hard disk. For more information about textures, please refer to Section 7.

2.4 Getting Started

After the hardware has been properly installed and the software is loaded onto the boot disk, you're ready for operation.

Power up the SCRIBE system. After system self-tests, the Loading Menu will appear on the Prompts Monitor with a new entry:

A ADVANCED FONT CREATE UTILITY

Since Advanced Font Create Utility includes all the features of the previous Font Utility program, it is advisable to remove the Font Create Utility from your boot disk.

To start the Advanced Font Create Utility, enter "A" from the Loading Menu. The system will load the program, then respond with the Advanced Font Create Utility Main Menu (Figure 2-7). You're now ready to begin operation.

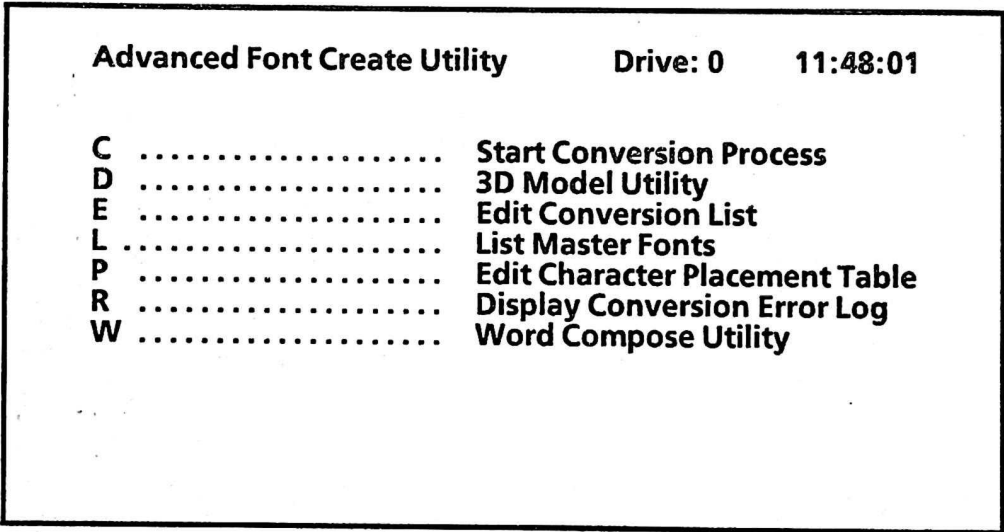


Figure 2-7. Advanced Font Create Utility Main Menu

Section 3

Advanced Font Create Utility Functional Overview

3.1 General

The Advanced Font Create Utility performs many functions related to creating machine fonts for use in Message Compose mode.

The Advanced Font Create Utility is composed of four functional blocks: Word Compose, 3D Model Utility, Textures, and Conversion Functions.

3.2 Word Compose Functional Overview

The Word Compose utility allows you to create words (to be treated as single objects by the SCRIBE) using any master font(s). A word is considered to be any combination of characters, words, or logos from one or more master font(s). Special functions of Word Compose allow you to rotate parts or all of the word, scale the word independently along the X and Y axes, shear parts or all of the word, and reposition any part or all of the word.

The completed word is then recorded on a disk (in master font form) for later conversion. This function allows operators to quickly and accurately create words with no need for trimming whatsoever.

3.3 3D Model Utility Functional Overview

The 3D Modeling utility allows you to specify the 3D positioning and lighting of any master font (i.e. font or word). Position is specified using a wire-frame model, and lighting is specified using a representation of an object with an adjustable light direction indicator. Light brightness, ambient light, and "shine" are also adjustable.

When a 3D model has been created (using both the wireframe and light models) it is recorded on disk, to be used during the machine font conversion process.

3.3.1 Wireframe Model System

The wireframe modeling system provides a means of specifying a variety of aspects for the machine font. These attributes include rotation in any direction, perspective, window height, and object depth (Z-depth). The

wireframe display consists of a wire-frame cube which represents the orientation of the master font as it would appear after conversion.

3.3.2 Light Model System

The Light Model system allows you to specify lighting of the master font or word. The following parameters are set during View Light Model:

- Light Direction
- Light Intensity
- Ambient Light Intensity
- Object Shine

The light model consists of a three-dimensional object (shaped like a wheel) and a variable light direction indicator. The position and Z-depth of the object are taken from the position and Z-depth of the wireframe model. The light direction indicator can be moved in any dimension using the cursor arrow keys. As the light direction indicator is moved about the object, the lighting of the object changes to match the movement. Other factors, such as light intensity, ambient light, and object shine, are entered from the keyboard, and changes in these parameters also affect the object's appearance.

3.4 Conversion Functions Functional Overview

The purpose of the conversion functions are to convert master font data into machine fonts for use in Message Compose. The term "**Master Font**" includes SCRIBE Master Fonts, fonts containing custom-composed or user-composed logos, and master word description files. The term "**Machine Font**" means any form of font, word, or logo which can be used during Message Compose.

The conversion functions provide a means of specifying any of ten character sets (Standard ASCII, International, or user-defined) for the machine font, as well as character placement within the character set.

The conversion from master font to machine font involves specifying font size, edge type, size, and direction. Also, texture or a previously-recorded 3D model can be applied to each master font if desired. (The texture(s) are available in a variety of styles, and must be purchased separately from CHYRON.)

Since the conversion process takes a fair amount of time for each master font, the utility allows you to specify a "conversion list" of up to 100 entries. Then, the conversion can be run over an extended period, such as overnight. A conversion error log is provided to record any errors that are encountered during the conversion process.

3.4.1 Edit Character Placement Table Function

The Edit Character Placement Table function allows you to specify characters for display from master fonts that are not selected when using the standard or international character sets during conversion.

Certain font styles contain several variations of a particular character, and the Edit Character Placement table function enables you to select variations of the character for on-screen display during Message Compose.

For example, a font with standard character placement will display an "A" character when the key labeled "A" is pressed. But, by editing the Character Placement table, you can key in another character and store it under the "A" keycap on the keyboard. Then, when you press the "A" keycap on the SCRIBE keyboard during Message Compose, the substitute character appears on the screen.

There are 10 character placement tables available in the SCRIBE system. Table 0 is the standard font table. Table 1 is the standard table for international fonts. Tables 2 through 9 are used to assign special characters to keycaps. These tables are referred to as "User-Defined" tables.

3.4.2 Edit Conversion List

The Edit Conversion List utility executes the actual conversion of master font data into machine fonts (usable in Message Compose). The conversion list holds up to 100 entries, which enables you to set up the list, then run the conversion overnight or for a period of time when the system will not be in use.

On the conversion list, you select the master font (word, logo, or font), specify the size you desire (in scanlines), select the edge type and size, and also specify any options (such as Texture or 3D Model).

3.4.3 Conversion Options

Conversion options allow you to specify 3D modeling or texture for the machine font.

3D Modeling allows you to apply a previously-recorded 3D model to the master font being converted (for more information, please refer to Section 6, 3D Modeling Utility).

Textures are available from CHYRON for use in the font create process, and are attributes which can be applied to master font data. Textures

are specified through the Conversion List by ID and drive number. Also, you may specify the rotation of the texture (in degrees) and whether the texture will be applied to the character or character edge. The List Master Fonts function (available through the Advanced Font Create main menu) includes a utility that will list all available textures by name and ID number. Either texture or 3D model, but not both, may be applied to any font or word.

NOTE

Any display created using 3D or Texture on characters or logos should be tested prior to use as a roll or crawl message to determine if the roll or crawl will operate correctly.

3.4.4 Start Conversion Process

The actual conversion process involves checking the items on the conversion list for validity, then performing conversions on the items on the list. Time required for each conversion depends on the complexity of the task; therefore it is not possible to accurately estimate the time required for the system to get through the entire conversion list.

If there are any errors (disk errors, system errors, etc.) during the conversion process these are recorded in the Conversion Error Log for later retrieval and interpretation. For more information about the Conversion Error Log, please refer to Section 7.

Section 4

Advanced Font Create Utility Conversion Functions

4.1 General

The Advanced Font Create Utility conversion functions are used to convert master font data (including words and/or logos) into machine fonts for use in Message Compose. The conversion utility allows you to specify options (3D model, texture) during conversion.

Since the conversion process takes a fair amount of time for each font, word, or logo, the utility allows you to specify a "conversion list" of up to 100 entries. Then, the conversion can be run over an extended period, such as overnight. A conversion error log is provided to record any errors that are encountered during the conversion process.

Other conversion functions allow you to specify character placement in the machine font and standard, international, or user-defined character sets.

All conversion functions are selected from the Advanced Font Create main menu, Figure 4-1:

Advanced Font Create		Drive: 0	14:57:04
C	.....	Start Conversion Process	
D	.....	3D Model Utility	
E	.....	Edit Conversion List	
L	.....	List Master Fonts	
P	.....	Edit Character Placement Table	
R	.....	Display Conversion Error Log	
W	.....	Word Compose Utility	

Figure 4-1. Advanced Font Create Utility Main Menu

4.2 Directory List Utility

The Directory List utility allows you to list master font/machine font names and IDs, words, textures, and 3D models stored on the currently-selected drive. (To change drive selection at any time, press DRV SLCT followed by the desired number.)

To use the Directory List utility, enter "L" from the Advanced Font Create main menu (Figure 4-1). The system will respond with:

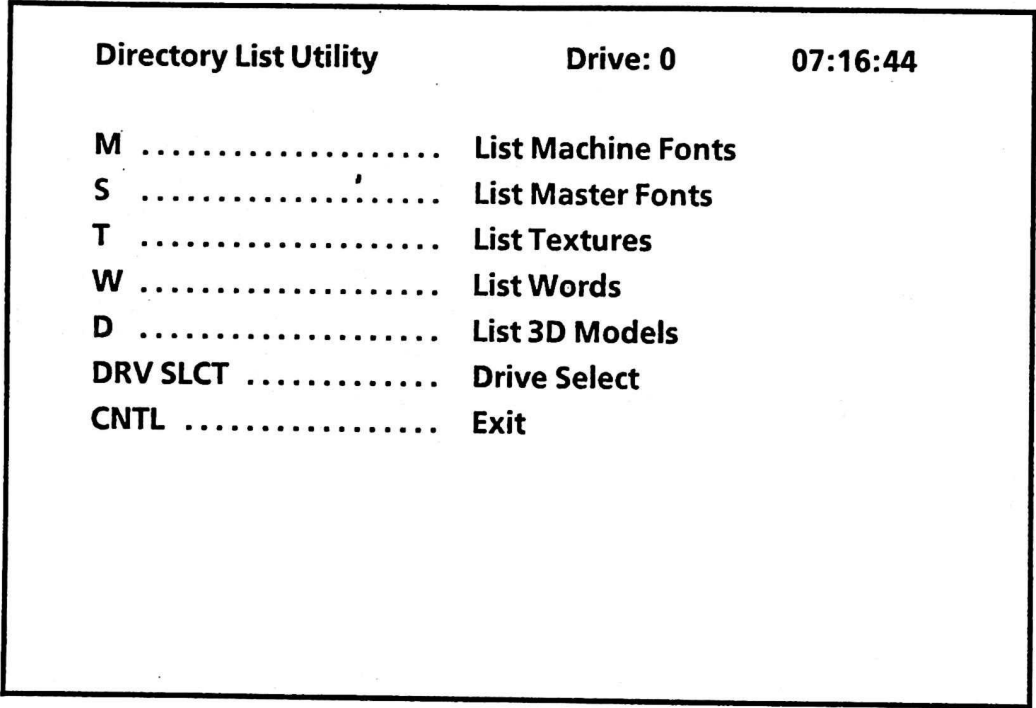


Figure 4-2. Directory List Utility Submenu

Press the keyboard key corresponding to the desired function. If you choose one of the "List..." functions, the system will respond with:

Enter Name
Press NLINE to Execute, CNTL to Exit

You may enter a name here, or press NEWLINE to get the entire listing.

Note that you may use * to find listings of files with similar names. For example, to find all files with the first four letters "NEWS", enter NEWS* into the Enter Name field. The system will then list all files starting with "NEWS".

To change the current drive selection, press the DRV SLCT key, then enter a drive number between 0 and 9, then press NEWLINE.

To exit from this submenu, press the CNTL key.

4.3 Edit Character Placement Table Function

The Edit Character Placement Table function allows you to specify alternate characters for display from master fonts that are not selected when using the standard character sets during conversion.

Certain font styles contain several variations of a particular character, and Edit Character Placement table function enables you to select variations of the character for on-screen display during Message Compose.

For example, a font with standard character placement will display an "A" character when the key labeled "A" is pressed. But, by editing the Character Placement table, you can key in another character and store it under the "A" keycap on the keyboard. Then, when you press the "A" keycap on the SCRIBE keyboard during Message Compose, the substitute character appears on the screen.

There are 10 character placement tables available in the SCRIBE system. Table 0 is the standard font table. Table 1 is the standard table for international fonts. Tables 2 through 9 are used to assign special characters to keycaps. These tables are referred to as "User-Defined" tables. (Please note that Tables 0 and 1 cannot be modified.)

4.3.1 Keyboard IDs and Master Font Character IDs

To edit a character placement table, you must "key in" a character to a keycap. This matches the keyboard ID number to the specific character you have selected to go there.

Keyboard IDs are pre-assigned numbers between 000 and 192 that designate the position of keys on the SCRIBE keyboard. Every alphanumeric key has its own ID: for example, ID# 065 is the keyboard ID for the upper-case "A" key.

Refer to Figure 4-3 to see the keyboard ID numbers for both standard and international fonts. Please note that a single key may have up to four ID numbers, based on use of the SHIFT and ALT CHAR (alternate character) keys. The numbers on the right side of a keycap refer to standard characters. The numbers on the left side of a keycap refer to international characters. (During Message Compose, such characters are displayed by pressing the ALT CHAR key followed by the key.)

Notice the shaded keycap in Figure 4-3. Keyboard ID number "065" is for the upper-case A, while ID number 097 refers to the lower-case "a". Both IDs are under the same keycap. For international fonts, ID number 149 refers to the upper-case symbol "Å", and ID number 150 refers to the lower-case symbol "å", also under the same keycap. Therefore, it is possible that each alphanumeric keycap can represent up to four different ID numbers, each with a different character or symbol.

Master font character IDs are pre-assigned numbers that distinguish one character from another. These ID numbers remain the same from font to font. For example, the master font character ID "001" always refers to upper-case "A", no matter which font you are using. (You can find these numbers on the printed master font sheets supplied with each master font disk. The master font ID is the number above the character. If your master font sheet contains two rows of numbers, ignore the second row.)

When you press the keycap labeled "A", you see the letter "A" appear on the screen only because its master font character ID (001) was keyed in to the keycap's keyboard ID (065). However, with the Edit Character Placement Table utility, you can assign any character (or logo) to any keycap. A word is automatically assigned the character ID 001. Using a standard character set to convert a word will result in the word being assigned to the upper-case "A" key. A user-defined character set may be used to associate the word with another keycap. Thus, you can convert a master font (i.e. your station logo) so that the logo appears when the keycap you've specified is pressed.

Table 4-1, Standard Character Placement Codes, shows the keyboard ID numbers and master font character ID numbers that correspond to standard characters.

Table 4-2, International Character Placement Codes, shows the keyboard ID numbers and master font character ID numbers that correspond to international characters. Refer to these tables as needed during Advanced Font Create operations.

The format used for master font character ID number is as follows. The character ID is given as ID|Version Number. If there is more than one version of a character, the version number is indicated in the fourth column, to the right of the divider "|".

Table 4-1. Standard Character Placement Codes

<u>Character</u>	<u>Keyboard ID</u>	<u>Master Font Char. ID</u>
Space	032	
!	033	085/0
\$	036	067/0
%	037	070/0
&	038	027/0
'	039	080/0
(	040	087/0
)	041	088/0
*	042	091/0
,	044	075/0
-	045	096/0
.	046	074/0
/	047	086/0
0	048	065/0
1	049	056/0
2	050	057/0
3	051	058/0
4	052	059/0

Table 4-1. Standard Character Placement Codes, Continued

Character	Keyboard ID	Master Font Char. ID
5	053	060/0
6	054	061/0
7	055	062/0
8	056	063/0
9	057	064/0
:	058	076/0
;	059	077/0
"	060	079/0
"	062	081/0
?	063	084/0
A	065	001/0
B	066	002/0
C	067	003/0
D	068	004/0
E	069	005/0
F	070	006/0
G	071	007/0
H	072	008/0
I	073	009/0
J	074	010/0
K	075	011/0
L	076	012/0
M	077	013/0
N	078	014/0
O	079	015/0
P	080	016/0
Q	081	017/0

Table 4-1. Standard Character Placement Codes, Continued

Character	Keyboard ID	Master Font Char. ID
R	082	018/0
S	083	019/0
T	084	020/0
U	085	021/0
V	086	022/0
W	087	023/0
X	088	024/0
Y	089	025/0
Z	090	026/0
a	097	028/0
b	098	029/0
c	099	030/0
d	100	031/0
e	101	032/0
f	102	033/0
g	103	034/0
h	104	035/0
i	105	036/0
j	106	037/0
k	107	038/0
l	108	039/0
m	109	040/0
n	110	041/0
o	111	042/0
p	112	043/0
q	113	044/0

Table 4-1. Standard Character Placement Codes, Continued

<u>Character</u>	<u>Keyboard ID</u>	<u>Master Font Char. ID</u>
r	114	045/0
s	115	046/0
t	116	047/0
u	117	048/0
v	118	049/0
w	119	050/0
x	120	051/0
y	121	052/0
z	122	053/0

Table 4-2. International Character Placement Codes

<u>Character</u>	<u>Keyboard ID</u>	<u>Master Font Char. ID</u>
i	004	113/0
ı	005	113/1
§	006	094/0
§	007	094/1
£	008	066/0
£	009	066/1
¢	010	068/0
¢	011	068/1
°	012	123/0
°	013	123/1
[	020	089/0
[	021	089/1
]	022	090/0

Table 4-2. International Character Placement Codes, Continued

Character	Keyboard ID	Master Font Char. ID
]	023	090/1
˘	024	119/0
˘	025	119/1
˘	026	116/0
˘	027	116/1
˘	028	118/0
˘	029	118/1
À	127	180/0
á	128	186/0
Æ	129	099/0
æ	130	103/0
Ø	131	100/0
ø	132	104/0
ƒ	133	181/0
ę	134	187/0
Ÿ	135	958/0
Ÿ	136	958/1
Ÿ	137	952/0
Ÿ	138	952/1
’	140	107/0
Œ	141	101/1
œ	142	105/0
’	145	115/0
’	146	115/1
’	147	114/0
’	148	114/1

Table 4-2. International Character Placement Codes, Continued

Character	Keyboard ID	Master Font Char. ID
Å	149	098/0
å	150	102/0
ß	151	106/0
ß	152	106/1
D	153	178/0
ḍ	154	182/0
l̇	162	185/0
l̇	163	179/0
l̇	164	183/0
«	185	110/0
»	187	111/0
ı	189	112/0
UC*	000	
UC*	001	
UC*	002	
UC*	003	
UC*	014	
UC*	015	
UC*	016	
UC*	017	
UC*	018	
UC*	019	
UC*	030	
UC*	031	
UC*	034	
UC*	035	

Table 4-2. International Character Placement Codes, Continued

Character	Keyboard ID	Master Font Char. ID
UC*	043	
UC*	061	
UC*	064	
UC*	091	
UC*	092	
UC*	093	
UC*	094	
UC*	095	
UC*	123	
UC*	125	
UC*	126	
UC*	139	
UC*	143	
UC*	144	
UC*	155	
UC*	156	
UC*	157	
UC*	158	
UC*	159	
UC*	160	
UC*	161	
UC*	171	
UC*	172	
UC*	173	
UC*	174	
UC*	175	

Table 4-2. International Character Placement Codes, Continued

<u>Character</u>	<u>Keyboard ID</u>	<u>Master Font Char. ID</u>
UC*	176	
UC*	177	
UC*	178	
UC*	179	
UC*	180	
UC*	181	
UC*	182	
UC*	183	
UC*	186	
UC*	188	
UC*	190	

*UC = Undefined Character (unused key)

NOTES

Certain master fonts contain different styles of the same character. These characters also have quite similar master font character ID numbers. These are shown as XXX/Y where XXX is the master font character ID number and Y is the version number. For example, a particular master font might contain three styles of the upper-case "A" with ID's 001/0, 001/1, and 001/2. The standard and international character sets are designed to use ID 001/0. Therefore version 0 of a character will be used unless the entry in the character placement table is altered.

When you are creating a Character Placement Table for international characters, always include the "Å" character. This character is the tallest character in any international font, and including it within the Character Placement Table guarantees that every accent aligns properly with its character.

For faster movement through the Character Placement Table, move the cursor to the Keyboard ID column, then use the Address Keypad to enter the keyboard ID number. When a keyboard ID number has been entered, the system will display that keyboard ID at the top of the Prompts screen.

4.3.2 Edit Character Placement Table Operating Procedure

To edit a character placement table, follow these steps:

Step 1: Enter the "P" key from the Advanced Font Create main menu.

The system will respond with Figure 4-4, Character Placement Table.

To change the drive selection, press the DRIVE SELECT key, then enter the new drive selection.

To read a previously-recorded placement table, enter the table number on the keyboard, then press the READ key.

Character Placement Table 0		Drive: 0
<u>Keyboard ID</u>		<u>Master Font ID</u>
0		96
1		0
2		0
3		0
4		0
5		0
6		0
7		0
8		0
9		0
10		0

Figure 4-4. Character Placement Table Display

- Step 2:** The keyboard ID numbers run in sequential order, ranging from 0 to 191. Movement through the Character Placement Table is accomplished by using the cursor arrows.

Also, you may move around on the list by entering the keyboard ID number you wish to see on the Address Keypad. The system will re-display the screen with the ID you have selected showing at the top. For example, if you enter "25" using the Address Keys, the system will display ID numbers 25 through 34 on the Prompts monitor.

- Step 3:** To assign master font ID numbers to the displayed keyboard ID's, move the cursor to the Master Font ID column for the displayed keyboard ID, then enter a Master Font Character ID number.

***Remember---** Keyboard ID numbers stand for keycaps and Master Font ID numbers stand for characters.*

- Step 4:** Repeat Step 3 for as many characters as you would like to store under keycaps.

- Step 5:** When you are finished editing the table, you must record it. Press the RCD key, and the system will respond with:

Enter Table Number:

Enter a number between 2 and 9 that corresponds to the table ID number. Press the NEWLINE key. The system will record the table in the machine font directory of the currently selected drive (Note: If you are going to use this table when creating machine fonts, you must place the table on the same drive as the drive the machine fonts will be recorded on.)

- Step 6:** To exit this utility function at any time, press the CNTL key. The system will return to the Advanced Font Create main menu.

4.4 Edit Conversion List Function

The Edit Conversion List utility is used to create and edit a list of entries that represent the conversion of master font data into machine fonts. The conversion list holds up to 100 master fonts (including fonts or words); this enables you to set up the conversion list and run the conversion overnight or for a period of time the system will not be in use.

On the conversion list, you select the master font (word, logo, or font), specify the size you desire (in scanlines), select the edge type and size, and also specify any options (such as texture or 3D model).

To enter items into the conversion list, or to edit the items in a conversion list, enter "E" from the Advanced Font Create main menu. The system will respond with the following menu (Figure 4-5):

	MASTER FONT/WORD ID	DR	MACHINE FONT ID	DR	FONT SIZE	EDGE TYPE	EDGE SIZE	CHAR SET	OPTIONS
1									
2									
3									
4									
5									
6									

Enter Master Font or Word ID
F: Master Font ID W: Word ID

Figure 4-5. Conversion List Menu

Follow this procedure to enter items into the conversion list:

- Step 1: Using either keypad, enter the pre-assigned ID number of the first master font or word to be

converted into a machine font. Then, press "F" if the ID is for a font, or "W" if the ID is for a word. Next, use the cursor-right key to move the cursor to the drive-select field (DR).

Step 2: Enter the number of the drive that contains the master font or word. (Please note that if "word" was specified in Step 1, the drive specified in this step must contain all master fonts used in the word, in addition to the word itself.) Then, move the cursor to the **MACHINE FONT ID** field.

Step 3: Enter the ID number where the machine font will be stored on disk (range: 1 to 9999). Then, move the cursor to the second **DR** field.

Step 4: Enter the number of the drive that will contain the converted machine font. Then, move the cursor to the **FONT SIZE** field.

Step 5: Using either keypad, enter the size (in scanlines) desired for the converted font.

Then, move the cursor to the **EDGE TYPE** field.

Step 6: When the cursor is positioned over the **EDGE TYPE** field, the lower part of the Prompts monitor will display:

N: No Edge
1: Lower Left
6: Right

B: Border
2: Straight Down
7: Upper Left

D: Drop Shadow
3: Lower Right
8: Straight Up

O: Offset
4: Left
9: Upper Right

Select an edge type by entering the letter corresponding to the desired edge type, followed (if necessary) by a number indicating edge direction. Then, move the cursor to the **EDGE SIZE** field.

Step 7: Enter an edge size in scanlines (range: 1 - 100 scanlines; actual range depends on font style). Then, move the cursor to the **CHAR SET** field.

Step 8: When the cursor is positioned over the **CHAR SET** field, the lower part of the Prompts Monitor will display:

Enter Character Set:

0: Standard

1: International

2 - 9: User Defined

Enter the number that corresponds to the type of character table you have set up in the Edit Character Placement utility: 0 for standard, 1 for international, 2 through 9 for "special" character sets. *Please note that the Character Placement Table in use must be stored on the same drive as the machine font specified.* Then, move the cursor to the **OPTIONS** field.

Step 9: When the cursor is positioned over the **OPTIONS** field, the lower part of the Prompts monitor will display:

Enter Y to Modify Options

To specify options (Texture, 3D Model), enter "Y" here, then proceed to paragraph 4.5 Otherwise, enter "N" here, followed by either NEWLINE or Cursor Left. The cursor will move to the beginning of the next conversion list line. Repeat steps 2 through 9 until all items you want to convert have been entered.

Step 10: To move between steps in the conversion list, use the cursor-left key to move to the step number field. The lower part of the Prompts monitor will display:

Enter Step Number

C: Copy Step

P: Paste Step

DELET ROW: Delete Step INSRT ROW: Insert Step

Enter a step number (range: 0 - 99), and the cursor will be placed at that point.

To copy a step from one line to another, move the cursor to the step, press "C", move the cursor to

where you want the step to go, then press "P". The step will be pasted into the new position.

Step 11: To exit from the Edit Conversion List utility, press CNTL. The system will re-display the Advanced Font Create main menu.

4.5 Conversion Options

Conversion options allow you to specify 3D modeling or texture (but not both) for the machine font. ***Please note that any machine font converted with 3D or Texture should be tested for proper roll or crawl operation before being used in roll or crawl applications.***

3D modeling allows you to apply a previously-recorded 3D model to the master font being converted. For more information about 3D modeling, please refer to Section 6 of this manual. ***Please note that any machine font converted with 3D model will not retain its font kerning table. You may have to perform character kerning manually with such machine fonts.***

Textures are attributes which can be applied to characters, words, or monochrome logos (Textures may not be applied to multicolored logos). Several textures are supplied with the Advanced Font Create utility, while others may be purchased from CHYRON. Please refer to Section 7 for more information about textures.

Textures are specified on the conversion list by ID number. Also, you can specify a rotation for the texture in degrees, and whether the texture is to be applied to the character or the character edge. The List Master Fonts function (available through the Advanced Font Create Utility main menu) includes a utility that will list all available textures by name and ID number.

To specify options in the Conversion List, follow this procedure:

Step 1: If you entered "Y" when prompted in Step 9 of the above paragraph, the lower part of the Prompts monitor will display:

Enter Options - CNTL to Exit - Spacebar to Clear

3D Model ID:	Drive:		
Texture ID:	Drive:	Angle:	Mode:

Step 2: **To Specify 3D Model:** Enter the ID number of a previously-recorded 3D model, then move the

cursor to the **Drive:** field, then enter the drive number where the 3D model is stored.

or

- Step 3: **To Specify Texture:** Move the cursor to the **Texture ID** field, and enter the ID number of the desired texture. Then, enter the drive number where the texture disk is located. Next, move the cursor to the **Angle:** field.
- Step 4: Enter an angle (range: 0 - 359°, clockwise) corresponding to the desired rotation of the texture. Then, move the cursor to the **Mode:** field.
- Step 5: The **Mode:** field toggles between **CHAR** and **EDGE**. (Use the cursor-up or cursor-down arrows to change the setting.) When set to **CHAR**, the texture will be applied to the character. When this field is set to **EDGE**, the texture will be applied to the character edge.
- Step 6: To clear an entry (if necessary), move the cursor to that field, then press the space bar to clear the entry. To exit from Options, press CNTL.
- Step 7: To exit from the Edit Conversion List utility, press CNTL. The system will re-display the Advanced Font Create Utility main menu.

4.6 Start Conversion Process

The actual conversion process involves checking the items on the conversion list for validity (including valid ID and drive numbers), then performing conversions on the items on the list. Time required for each conversion depends on the complexity of the task; therefore it is not possible to accurately estimate the time required for the system to get through the entire conversion list.

If there are any errors (disk errors, system errors, etc.) during the conversion, they are recorded in the Conversion Error Log for later retrieval and interpretation. For more information about the Conversion Error Log, refer to Section 8.

To start the conversion process, follow this procedure:

- Step 1:** From the Advanced Font Create Utility main menu, press "C" to begin the conversion process. The system will respond with:

Checking Font Conversion List

If there are any problems on the conversion list (invalid drive IDs, invalid font/word IDs, files not found, etc.), the system will display them on the Prompts monitor. To recover, press any key to return to the main menu, then press "E" to correct the conversion list.

A complete listing of the Conversion List Checkthrough error messages appears in Appendix A, paragraph A.3.

- Step 2:** If there are no errors in the conversion list, the system will start the conversion process. The prompts monitor will display a full-page conversion menu (Figure 4-6).

11:54:56

Font Name: Clarendon 701 Clarendon Bold (TM)

Master ID: 5284
Drive: 0

Machine ID: 5301
Drive: 0

Size: 300

Edge: None

Edge Size:

Texture: None

3D Model: None

Processing Character 002/0

Key: 66

Figure 4-6. Font Conversion Display

As each character is processed, the **Processing Character:** prompt will display the character and key ID. The conversion process will continue until completed, then the system will re-display the Advanced Font Create Main Menu (Figure 4-1).

If there are any errors encountered during the conversion process, they are displayed on the screen and recorded in the Conversion Error Log. In addition, the following message will be displayed on the Prompts monitor:

ERROR(S) DURING CONVERSION - DISPLAY ERROR LOG

If you encounter this error message, please refer to Section 7 for a description of how to read the Conversion Error Log. For a complete listing of possible error messages and explanations, refer to Appendix A.

This concludes the Conversion Functions description.

Section 5

Word Compose Functions

5.1. General

The Word Compose utility allows you to combine characters from various master fonts into objects to be manipulated using 3D-modeling or texture mapping. During word compose, the object or its components can be rotated, scaled in both X and Y axes, sheared, or repositioned.

Creating words from the outlines of master fonts improves the appearance of the word and facilitates recall for commonly used words. If there is a special character alignment for a word, the word can be stored with this character alignment and recalled instantly. Also, words used with 3D modeling or texture are enhanced due to proper relationships between character positions.

5.2 Initial Operation

To use the Word Compose function, press **W** from the Advanced Font Create Utility main menu (Figure 4-1). The system will respond with the Word Compose Menu, shown in Figure 5-1:

Word Compose

Drive: 0

04:16:31

CNTL	Special Functions
COFNT	Select Font From Current Character
DEL CHAR	Delete Character
ERASE	Erase Screen
READ/RCD	Read/Record Word
SHIFT CHAR/ROW	Shift Character/Row
SHIFT WORD	Shift All Characters
ESC	Exit Word Compose

Font: 5005	Name: Swiss 721 Bold (TM)		
Char: e	Prior: 1	Angle: 0	Shr: 0
Size: 100	Row: 1	XScale: 100%	YScale: 100%
X: 100	Y: 100		

Figure 5-1. Word Compose Submenu

5.3 Word Compose Functions

5.3.1 Special Functions Menu (CNTL Functions)

The Special Functions for Word Compose are used to load fonts, insert special (non-ASCII represented) characters into the display, and change character priority as well as allowing the operator to specify amount and direction of shear, scale, and rotate. To display the special functions menu, press the CNTL key. The Special Functions menu (Figure 5-2) will appear on the Prompts Monitor.

Special Functions

D	.....	Directory List
F	.....	Select Font
H	.....	Shear
I	.....	Special Character Insert
P	.....	Change Character Priority
R	.....	Rotate
S	.....	Scale

Figure 5-2. Special Functions Submenu

5.3.1.1 Select Font Function (CNTL, F)

One of the capabilities of Word Compose is to combine outlines from different master fonts or logos into a single word. To select an initial or new master font to use for Word Compose, display the Special Functions Menu (Figure 5-2) then press "F". The system will respond with:

SELECT FONT

Font: ---- Size: 100 Drive: 0

Press NEWLINE to Execute, CNTL to Exit.

Use the cursor keys on the SCRIBE keyboard to move the cursor between fields. Enter or change values using either the address keypad or the A/N keyboard. (This function may also be used as a method of changing just the scanline size of a previously entered font.)

Typing in Word Compose is identical to typing in Message Compose: the standard international placement table is used for key assignment, and the ALT CHAR key is used for special characters and accents.

5.3.1.2 Shear Function (CNTL, H)

The Shear function allows the operator to perform left or right shear to characters or logos on the display. The operator must specify the direction, angle, and mode of the shear. To use the Shear function, enter "H" from the Special Functions menu. The system will respond with:

SHEAR

Mode: CHAR Angle: 0 Direction: LT
Press NEWLINE to Execute, CNTL to Exit

As with the Select Font function, the cursor keys are used to move between fields in this selection menu. However, the **Mode:** and **Direction:** fields are toggles. To set the toggle for **Mode:**, use the spacebar.

The **Mode:** field toggles between **CHAR** (character) and **ROW** (row). To perform shear on a character, the cursor must be on the character. To perform shear on a row, the cursor can be at any location on the row. The **Direction:** field toggles between either **LT** (left turn) or **RT** (right turn).

To enter a value into the **Angle:** field, use the Address Keypad to enter a value in degrees (range: 0° to 75°, in one-degree increments).

5.3.1.3 Special Insert Function (CNTL, I)

This function is used for inserting special characters into the display. (These are listed on the Master Font list(s) supplied with your font disks, or logos stored under special character ID's in Logo Compose.) These special characters are not represented in the standard ASCII character set; therefore this function allows you to enter the character by its ID number as shown on the Master Font list.

To use the Special Insert Function, enter "I" from the Special Functions Menu. The system will respond with:

SPECIAL INSERT

ID: 000/0

Press NEWLINE to Execute - CNTL to Exit

Enter the Character ID and Version (three-digit ID / Version) for the particular character exactly as it appears on the Master Font card. If there is no listed version of the character, enter 0 into the Version field.

When the ID has been entered correctly, press NEWLINE.

5.3.1.4 Directory List Utility (CNTL, D)

This function is used to list Master Fonts, Machine Fonts, Words, 3D Models and Textures that are recorded on the selected disk. To use the Directory List Utility, enter "D" from the Special Functions Menu. The system will respond with Figure 5-3, below:

Directory List Utility		Drive: 0	14:36:02
M	List Machine Fonts		
S	List Master Fonts		
T	List Textures		
W	List Words		
D	List 3D Models		
DRV SLCT	Drive Select		
CNTL	Exit		

Figure 5-3. Directory List Utility Submenu

Press the keyboard key corresponding to the desired function. If you choose one of the "List..." functions, the system will respond with:

Enter Name
Press NEWLINE to Execute, CNTL to Exit

You may enter a name here, or press NEWLINE to get the entire listing.

Note that you may use * to find listings of files with similar names. For example, to find all files with the first four letters "NEWS", enter NEWS* into the "Enter Name" field. The system will then list all files starting with "NEWS".

To change the current drive selection, press the DRV SLCT key, then enter a drive number.

To exit from this submenu, press the CNTL key.

5.3.1.5 Change Character Priority (CNTL, P)

Character priority is a value assigned to characters of a word that tells the system which characters to place "on top" of others during the conversion process. Character priority is ordinarily established by the order characters are typed; thus the seventh character typed has priority 7, and the first character has priority 1.

In the conversion process, the character with the highest priority number will be converted so that it overlaps all other characters below it, and the character with the lowest priority will be overlapped by all characters above it.

To change the character priority, move the cursor over the character on the Color Edit monitor. Then, enter "P" from the Special Functions submenu. The system will respond with:

CHANGE PRIORITY

Old Priority: 7 New Priority: 1

Press NEWLINE to Execute - CNTL to Exit

Enter the new priority value using either the A/N keyboard or the address keypad, then press NEWLINE.

5.3.1.6 Rotate (CNTL, R)

The Rotate function allows you to rotate single characters or the entire row by specifying an angle and a direction for the rotation. To use the Rotate function, press "R" from the Special Functions submenu. (Note: To rotate a character, the cursor must be positioned over the character. To rotate a row, the character must be positioned on the row.) The system will respond with:

ROTATE

Mode: CHAR Angle: 0 Direction: RT

Press NLINE to Execute, CNTL to Exit

Use the cursor keys to move between fields in this selection menu. The **Mode:** and **Direction:** fields are toggles.

To set the toggle for **Mode:** (toggles between **CHAR** and **ROW**), use the spacebar. To set the toggle for **Direction:**, use the same method. (This field toggles between **RT** <right turn> and **LT** <left turn>.)

To enter a value into the **Angle:** field, use the Address Keypad to enter a value in degrees (range: 0° to 359°, in one-degree increments).

After entering the desired values, press **NEWLINE** to execute the rotation.

5.3.1.7 Scale (CNTL, S)

The Scale function allows you to independantly scale the X-size and Y-size of individual characters or the entire word. The scaling function is performed as a percentage value of the size specified when loading the font.

To use the Scale function, move the Color Edit cursor to be positioned over the character to be scaled (or on the row to be scaled), then enter "S" from the Special Function submenu. The system will respond with:

SCALE

Mode: CHAR **X-Scale:** 100% **Y-Scale:** 100%
Press **NEWLINE** to Execute - **CNTL** to Exit

The **Mode:** field toggles between **CHAR** and **ROW**. Use the spacebar to select the desired mode. Using the cursor keys and the Address Keypad, enter scaling values into the X-scale and Y-scale fields. When completed, press **NEWLINE** to execute the scaling function.

5.3.2 On-Screen Font Selection (COLOR FONT)

The **COLOR FONT** key may be used to select the font style of a character currently on the screen. For example, if you are using several different font styles on the display, you may re-select one of the fonts by moving the cursor to a character in the desired font, and pressing the **COLOR FONT** key. The system will change the font selection to that character's font. This function is useful for determining what fonts were used when a word was initially recorded.

5.3.3 Delete Character (DEL CHAR)

This key is used to delete characters from the display. To use this function, move the cursor over the character to be deleted (make sure you are on the correct character by checking the Status Line on the bottom of the Prompts monitor), then press DEL CHAR. The character will be deleted.

5.3.4 ERASE (ERASE)

The ERASE function will erase the entire screen. To use this function, press the ERASE key, and the display will be erased.

5.3.5 Read and Record Functions (READ/RCD)

The Read and Record functions allow you to save and recall your work in between sessions, or to save and recall standard format displays for modification. These functions operate in the same fashion as those in Message Compose.

Please note that a word must be recorded before it can be used in the Font Conversion process.

5.3.5.1 Read (READ)

To use the Read function, press the READ key. The system will respond with:

READ WORD

Word ID: Drive: 0

Press NEWLINE to Execute - CNTL to Exit

Using the cursor keys and address keypad, enter the ID number of the word and the number of the drive where it is stored, then press NEWLINE.

5.3.5.2 Record (RCD)

To save a word on a disk, press RCD. The system will respond with:

RECORD WORD

Word ID: Word Name: Drive: 0

Press NEWLINE to Execute - CNTL to Exit

Using the cursor keys and address keypad, enter the ID number of the word (range: 0 - 999), the word's name, and the number of the drive where it is to be stored, then press NEWLINE.

5.3.6 Shift Character/Shift Row (SHIFT CHAR, SHIFT ROW)

The Shift Character and Shift Row functions allow you to move either an individual character or a row of characters on the display. To use the Shift Character function, move the cursor over the character to be moved, then press and hold the SHIFT CHAR key plus one of the cursor arrow keys. The character will move in the direction of the arrow.

To use the Shift Row function, move the cursor to any point on the row to be moved, then press and hold the SHIFT ROW key plus one of the cursor arrow keys. The row will move in the direction of the arrow.

The SUPER SHIFT function works with the Shift Character/Shift Row functions. To use the SUPER SHIFT function, enter a number on the Address Keypad corresponding to the number of pixels or scanlines the character is to be moved, then press and hold the SHIFT and SHIFT CHAR or SHIFT ROW keys. Then, press one of the cursor keys. The character or row will move the specified number of pixels or scanlines on the display.

5.3.7 Shift Word (SHIFT WORD)

The Shift Word function allows you to move all characters on the display. To use the Shift Word function, press and hold the SHIFT WORD key plus one of the cursor arrow keys. All characters on the screen will move in the direction of the arrow.

The SUPER SHIFT function works with the Shift Word function as well. To use the SUPER SHIFT function, enter a number on the Address Keypad corresponding to the number of pixels or scanlines the word is to be moved, then press and hold the SHIFT and SHIFT CHAR keys. Then, press one of the cursor keys. The word will move the specified number of pixels or scanlines on the display.

5.3.8 Exit (ESC)

To exit from the Word Compose Utility program, press the Escape key (ESC). The system will exit from Word Compose, and the Prompts monitor will display the Advanced Font Create Utility Main Menu. (Figure 3-1).

5.4 Conversion Notes

All words that are converted into machine fonts are automatically given Master Font Character ID 001. In the Standard and International character placement tables, Master Font Character ID is assigned to the upper-case "A" key (keyboard ID 065). Should you desire to place this word elsewhere on the keyboard, you must create a special character placement table with Master Font Character ID 001 stored under any keyboard ID for typing during Message Compose.

Section 6

3-D Modeling Functions

6.1 General

The 3D Modeling utility allows you to specify the 3D positioning and lighting of any Machine Font (i.e. font, word or logo). Position (including rotation, perspective, window height, and object thickness) is specified using a wire-frame model, and lighting is specified using a representation of a 3D object with an adjustable light direction. Light brightness, ambient light, and "shine" are also adjustable.

When a 3D model has been created (using both the wireframe and light models) it is recorded on disk, to be used during the machine font conversion process. The 3D rendering process will work for all single-colored logos and fonts. The system will not render a 3D version of a multi-colored logo. When logos are composed using Logo Compose, be sure that the color used for the single-color logo outline is Color #1. The 3D rendering process may not work properly if called upon to use any other color number, even if there is only one color used in the logo.

Important Note: 3D characters are not intended for roll or crawl operation. Due to the complexity of 3D characters, there is often not enough "character build time" to create a roll or crawl page without jumps or hesitations. This is a normal limitation, and should not be considered a problem with your unit.

6.2 Initial Operation

To use the 3D Modeling function, press "D" from the Advanced Font Create Utility main menu (Figure 4-1). The system will respond with the View Wire Frame submenu (shown in Figure 6-1) on the Prompts Monitor, and the Color Edit display will show a wire-frame cube (Figure 6-2) which represents the orientation of the master font during conversion.

The bottom two rows of the Prompts display show the following values:

- Window Size
- Line Size
- Character Depth
- View Rotation
- Perspective

The values for these properties are entered by pressing the letter corresponding to the function, then using the "H" (for 'Higher') and "L"

--- VIEWING WIRE MODEL ---

READ/RCD	Read/Record 3D Model
D	Display List Utility
ESC	Exit
Arrows (w/ SHIFT CHAR)	Adjust View Angle
M	Change to Light Model Mode
V	View Object
P	Adjust Perspective
R	Adjust View Rotation
S	Adjust Line Size
Z	Adjust Object Z-Depth
H	Adjust Perspective by + 10
L	Adjust Perspective by -10
Window Size: 400	Line Size: 399
View Rotation: 0	Character Depth: 20
	Perspective: 200

Figure 6-1. View Wire Model Submenu

(for 'Lower') keys. The amount of increase or decrease defaults to 10 units; however a larger or smaller amount may be entered using the Address Keypad.

More information about each function appears in the corresponding paragraph.

6.3 Wire Model Functions

6.3.1 Read/Record

The Read and Record functions used in 3D modeling are essentially similar to those used for Word Create. Please remember that reading or recording a 3D model involves both the wire model and the light model!

To read a 3D model from a disk, press the READ key. The system will respond with:

```

READ 3D MODEL FUNCTION
3D File : 0
Drive: 0
NEWLINE to Execute - CNTL to Exit

```

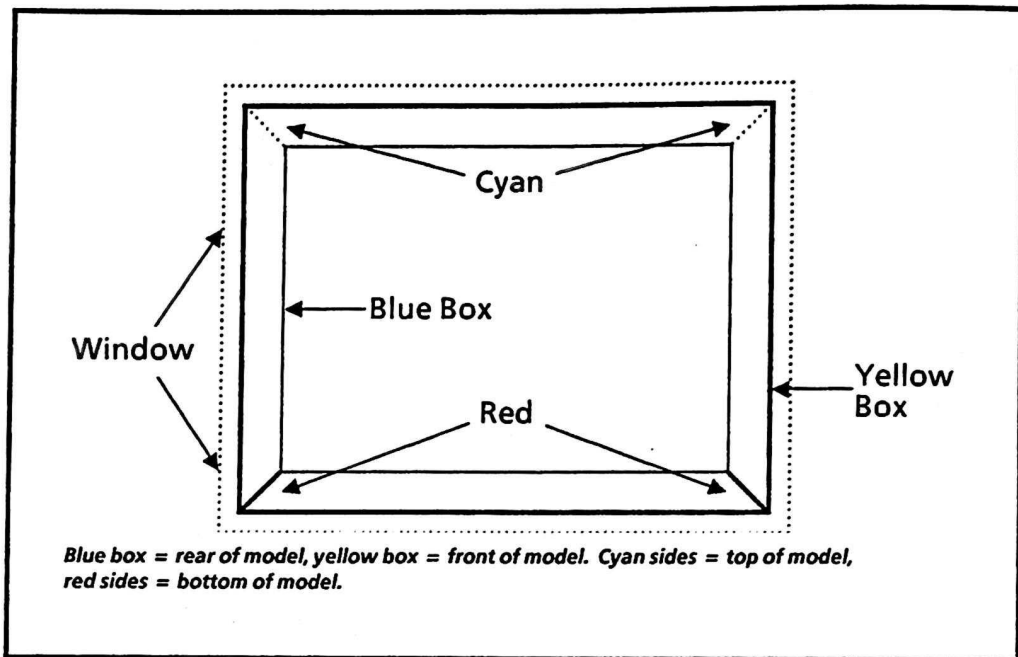



Figure 6-2. Wire Frame Cube Display

Using the keyboard and the cursor arrow keys, fill in the "Drive:" and "3D File:" fields. When the information has been entered, press NEWLINE to read the file.

To record a 3D model from a disk, press the RCD key. The system will respond with:

RECORD 3D MODEL
3D File: Drive:
3D Filename:
NEWLINE to Execute - CNTL to Exit

Enter 3D File ID number (range: 0 - 999), drive number, and 3D file name here, then press NEWLINE. The system will record both the wireframe model and the light model at the ID number you enter.

6.3.2 Display List Function

The Display List function allows you to display a directory of master fonts on the selected storage device. To use this function, enter "D" from the View Wire Model menu. The system will respond with Figure 6-3, below:

Directory List Utility	
M	List Machine Fonts
S	List Master Fonts
T	List Textures
W	List Words
D	List 3D Models
DRV SLCT	Drive Select
CNTL	Exit

Figure 6-3. Display List Utility Submenu

Press the keyboard key corresponding to the desired function. If you choose one of the "List..." functions, the system will respond with:

Enter Name
Press NEWLINE to Execute - CNTL to Exit

You may enter a name here, or press NEWLINE to get the entire listing.

Note that you may use * to find listings of files with similar names. For example, to find all files with the first four letters "NEWS", enter NEWS* into the "Enter Name" field. The system will then list all files starting with "NEWS".

To change the current drive selection, press the DRV SLCT key, then enter a drive number, then press NEWLINE.

To exit from this submenu, press the CNTL key.

6.3.3 Adjusting Wireframe View Angle

View Angle of the wireframe corresponds to the position of the object from the viewer's perspective. The cursor arrows adjust the view angle by rotating around the X-axis (using the cursor-up and cursor-down keys) and around the Y-axis (using the cursor-right and cursor-left keys). Refer to Figure 6-4, 3D Object Orientation.

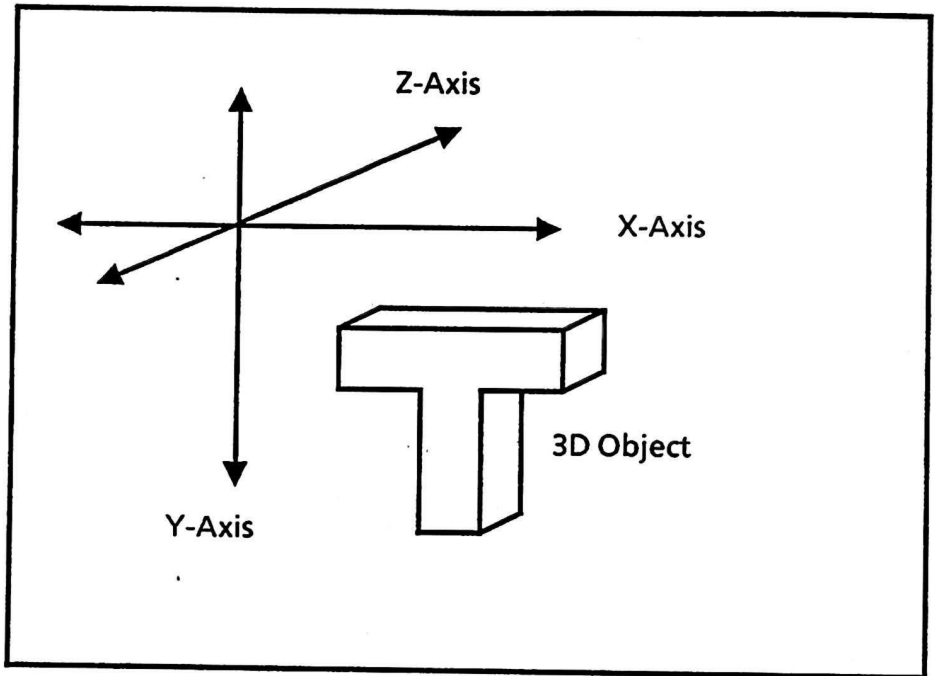


Figure 6-4. 3D Object Orientation

When used alone, the cursor keys will rotate the wireframe by 10°. When used with the SHIFT CHAR key, the cursor arrows rotate the view angle by one-degree increments.

Be sure to note the top, bottom, front, and back of the wireframe object during adjustment and make sure that the wireframe orientation matches the desired orientation of the 3D model.

6.3.4 Adjust Perspective

The "perspective" adjustment provides a means of adjusting how far the object will appear from the viewer. For example, if the perspective is

small, then the object will seem very close to the viewer since the edges of the object will appear non-parallel. If, however, the perspective is large, the object will have roughly parallel edges, giving the illusion of greater distance.

To adjust the perspective, enter "P" from the View Wire Model submenu. The system will respond with:

H Adjust Perspective by + 10 Units
L Adjust Perspective by - 10 Units

Use the "H" and "L" keys to adjust for greater or lesser perspective. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the perspective value, the change will be observed in the wireframe object.

6.3.5 Adjust View Rotation

The Adjust View Rotation function provides a means of rotating the wire frame object around the Z-axis. The status display on the bottom of the Prompts Monitor will show the view rotation in degrees.

To adjust the rotation, enter "R" from the View Wire Model submenu. The system will respond with:

H Adjust Rotation by + 10 Degrees
L Adjust Rotation by - 10 Degrees

Use the "H" and "L" keys to adjust the rotation. If you wish to adjust in larger or smaller increments than 10 degrees, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the rotation, the change will be observed in the wireframe object.

6.3.6 Adjust Object Z Depth

The Object Z Depth adjustment allows you to specify the thickness of the model along the Z-axis (front to back). As you adjust Z-depth, the wireframe model and the Z-depth field of the status display will reflect the adjustment.

To adjust Z-depth, enter "Z" from the View Wire Model submenu. The system will respond with:

H Adjust Z-Depth by + 10
L Adjust Z-Depth by - 10

Use the "H" and "L" keys to adjust the Z-depth. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the Z-depth, the change will be observed in the wireframe object and on the status display.

6.3.7 Adjust Line Size

The Line Size adjustment allows you to adjust the window containing the wire model so that during View Object (paragraph 6.3.8), you will see the object at the desired scanline size. Thus, if you want to preview a logo that is eventually going to be 200 scanlines, set the Line Size to 200 scanlines, then select View Object. Thus, this function allows you to see how an object will look at the desired size, without performing a full conversion.

To adjust Line Size, enter "S" from the View Wire Model submenu. The system will respond with:

```
H          Adjust Line Size by + 10 Units
L .....   Adjust Line Size by - 10 Units
```

Use the "H" and "L" keys to adjust the line size. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the line size, the change will be observed in the wireframe object and on the status display.

6.3.8 View Object

The View Object function enables you to preview a character, word or logo with the size and orientation of the wireframe model. Before selecting View Object, you should select Line Size and check the wireframe model orientation to be sure it is correct for your application.

To view an object, enter "V" from the View Wire Model submenu. The system will respond with:

```
VIEW 3D OBJECT FUNCTION
Master ID: --- F   Character ID: 000/0   Drive: 0
F: Master Font   W: Word
NEWLINE to Execute, CNTL to Exit
```

Enter the master font ID of the object you want to view. Press "W" if the object is a word, "F" if the object is a font. If the object is from a font, enter the character ID and version number also. Then, enter the drive number where the object is located.

Press NEWLINE, and the object will be rendered in the wireframe model's orientation. The rendering process takes several minutes. To exit from View 3D Object, press the CNTL key.

NOTE

More complex objects take much longer to render for preview than do simple objects. If you are just testing for correct wireframe orientation, you may want to create a single-character object for preview purposes only. This will save time during the modeling process.

6.3.9 Change to Light Model

To change from Wire Model system to the Light Model system, press "M" from the View Wire Model submenu. The system will respond by displaying the Light Model display on the Color Edit monitor and the View Light Model Submenu on the Prompts monitor. These displays and all Light Model functions will be covered in paragraph 6.4 of this section.

6.3.10 Exiting from 3D System

To exit from the 3D system, press the ESC key. The system will exit from 3D modeling, and the Prompts monitor will display the Advanced Font Create main menu (Figure 4-1).

6.4 Light Model System

6.4.1 General

The Light Model system allows you to specify lighting of the master font, word, or logo. The following parameters are set during View Light Model:

- Light Direction
- Light Intensity
- Ambient Light Intensity
- Object Shine

The light model consists of a 3D object and a variable light direction indicator (resembles a wireframe tetrahedra). The position and Z-depth of the object is taken from the position and Z-depth of the wireframe model. The indicator is moveable in all dimensions using the cursor arrow

keys. As the indicator is moved about the object, the lighting of the object changes to match the movement. Other factors, such as light intensity, ambient light, and object shine, are entered from the keyboard, and changes in these parameters also affect the object's appearance.

To enter the Light Model system, press "M" from the View Wire Model submenu. The system will respond with Figure 6-5, below:

--- VIEWING LIGHT MODEL ---	
READ/RCD	Read/Record 3D Model
D	Display List Utility
ESC	Exit 3D System
Arrows (w/ SHIFT CHAR)	Adjust Light Direction
M	Change to Wire Model Mode
A	Adjust Ambient Light
B	Adjust Light Brightness
S	Adjust Object Shine
H	Adjust Brightness by + 10
L	Adjust Brightness by -10
Ambient Light: 0%	Object Shine: 1
Light Brightness: 100%	

Figure 6-5. View Light Model Submenu

NOTE

Since the Read/Record and Display List Utility functions are duplicated on the Viewing Wire Model submenu, please refer to paragraphs 6.3.1 and 6.3.2 for instructions on how to use these functions.

6.4.2 Adjust Light Direction

The cursor arrow keys are used to adjust the position of the light direction indicator. When used alone, the cursor keys move the indicator

in 10° increments. When used with the SHIFT CHAR key, the cursor arrows move the indicator one (1) degree at a time.

Adjust the light direction to about where you want it using the cursor direction keys alone, then use the combination of SHIFT CHAR plus the cursor arrows to perform fine adjustment of light direction.

6.4.3 Adjust Ambient Light

Ambient light is light that comes from all directions, such as the light provided by a overcast sky. Ambient light as used with the Light Model is light that affects all surfaces equally. The ambient light level is measured as a percentage of the light intensity level.

To adjust the ambient light level, enter "A" from the View Light Model submenu. The system will respond with:

```
H ..... Adjust Ambient Light by + 10 %  
L ..... Adjust Ambient Light by - 10 %
```

Use the "H" and "L" keys to adjust for greater or lesser ambient light level. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the ambient light level, the change will be observed on the light model display.

6.4.4 Adjust Light Brightness

Light Brightness (light intensity) is the intensity of the light coming from the light direction indicator. As light intensity is increased or decreased, the intensity of light reflected from the object will increase or decrease.

To adjust the light brightness level, enter "B" from the View Light Model submenu. The system will respond with:

```
H ..... Adjust Light Brightness by + 10 %  
L ..... Adjust Light Brightness by - 10 %
```

Use the "H" and "L" keys to adjust for greater or lesser light intensity level. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the intensity level, the change will be observed on the light model display.

6.4.5 Adjust Object Shine

Object Shine is a function of how "shiny" the object appears. Shine is defined as a function of how the light source reflects from object surfaces: if the light direction is perpendicular to the surface, it reflects at 100% of light intensity. If a surface is not exactly perpendicular to the light direction, it reflects less light. The Object Shine level is a function of how much light these not-quite perpendicular surfaces reflect.

This function is used to create light-source "highlights" on objects. For best results, use the "Object Shine" function in conjunction with a lower light brightness and ambient light level.

To adjust the object shine level, enter "S" from the View Light Model submenu. The system will respond with:

```
H ..... Adjust Object Shine by + 10 %  
L ..... Adjust Object Shine by - 10 %
```

Use the "H" and "L" keys to adjust for greater or lesser object shine level. If you wish to adjust in larger or smaller increments than 10 units, enter a new value into the Address Readout, then use the "H" and "L" keys to make the adjustment. As you change the object shine level, the change will be observed on the light model display.

Experiment with "Object Shine" until you become comfortable with its operation.

6.5 Displaying 3D Characters During Message Compose

6.5.1 General

Characters, words, or logos converted using 3D modeling must be displayed in Message Compose mode along with a properly configured sub-palette. If a 3D character is displayed without the correct subpalette, the object will not be properly anti-aliased, and may appear distorted.

Although a 3D object may be displayed in any color desired, there is a special procedure for setting up subpalettes for 3D objects.

For additional information about the SCRIBE subpalette functions, please refer to the SCRIBE Operator Manual, Part III, paragraph 3.3.3.

6.5.2 Message Compose Subpalette Basic Operation

There are eight (8) subpalettes available to the operator at one time in Message Compose mode. One subpalette is defined through each color key. To select a subpalette during Message Compose:

- Step 1: Enter the Palette Select mode by pressing CNTL, "P".
- Step 2: At this point, you may select one of the eight subpalettes to modify by pressing the "P" key followed by the color key whose subpalette you wish to modify. A subpalette display will appear on the bottom of the display. The 29 boxes displayed represent the colors loaded into that subpalette. A flashing cursor will appear around one box, indicating which subpalette location is to be modified. This cursor may be moved by using the SHIFT ROW key plus either the cursor-left or cursor-right keys.

6.5.2 3D Object Subpalette Setup

Subpalette mode has a "graduated color" function that enables you to specify the starting and ending color and have the system automatically generate and load all the middle colors. This "graduated color" function is used when setting up subpalettes for 3D characters.

To set up the 3D object palette:

- Step 1: Position the subpalette cursor over color position #3, which is the first box on the left on the subpalette display (the color position number is indicated on the right side of the Prompts monitor).
- Step 2: Move the spectrum cursor over the black colored box on the spectrum display using the normal cursor direction keys.
- Step 3: Press the "G" key to enter the Graduated Color mode.
- Step 4: Press the space bar to store the starting color (black) into subpalette position #3.
- Step 5: Move the subpalette cursor to color position #17 in the subpalette display by using the SHIFT ROW and cursor-right keys.

- Step 6:** With the subpalette cursor in place over subpalette color position #17, move the spectrum cursor (using the normal cursor-direction keys) to the color you want the 3D object to be displayed in. For best results, we recommend that this color be fully saturated (saturation value: 255) and the intensity to be set half-way (intensity value: 128).
- Step 7:** Press the spacebar. The colors between black and the desired object color should be loaded into the subpalette positions #3 - #17.
- Step 8:** Enter the Graduated Color mode again by pressing the "G" key.
- Step 9:** Without moving the spectrum or subpalette cursors, press the spacebar to enter the same color into the next graduated ramp.
- Step 10:** Using SHIFT ROW plus cursor-right, move the subpalette cursor to subpalette color position #31 (this is the last box on the right of the subpalette display).
- Step 11:** Using the cursor-direction keys, move the spectrum cursor to the color white box.
- Step 12:** Press the spacebar. You should now see the subpalette display ramp from black to white, with the desired 3D object color at subpalette color position #17.
- Step 13:** To exit Subpalette Mode, press the CNTL key.

This palette setup is what the 3D rendering software requires to properly display a 3D character, word, or logo with complete anti-aliasing. If you randomly change the colors in this display the 3D character will no longer be properly anti-aliased.

Section 7

Texture Functions

7.1 General

The Texture functions allow you to specify texturing for any machine font (i.e. font, or word). Textures may be applied to the surface of a character or to its edge. Textures are applied to fonts or words during the conversion process, and are specified as conversion options. In addition, the operator specifies rotation angle for the texture at this time. (*For operating instructions for using Texture as a conversion option, refer to Section 4, paragraph 4.3.4.*)

There are two types of textures available for your SCRIBE system: Opaque and Transparent. Opaque textures (example: wood, stone) appear completely solid, and do not allow video to pass through them. Transparent textures (example: cellophane) allow video to pass through them with the video being tinted by the color set for the texture.

Important note: Textured characters are not intended for roll or crawl operation. Due to the complexity of textured characters, there is often not enough "character build time" to create a roll or crawl page without jumps or hesitations. This is a normal limitation, and should not be considered a problem with your unit.

7.2 Supplied Textures

The following textures are supplied with Advanced Font Create Utility:

- Linear Shading	(ID: 0000)
- Wave Shading	(ID: 0001)
- Refractive Shading	(ID: 0002)
- Brick - 1	(ID: 0100)
- Stone - 1	(ID: 0200)
- Marble - 1	(ID: 0300)
- Wood - 1	(ID: 0500)
- Cellophane - 5	(ID: 0700)

Textures 0000, 0001, and 0002 are special textures that are supplied within the Advanced Font Create Utility package and as a result should be copied onto your hard disk.

Other textures exist on separate floppy disks. Since each of these textures contain approximately 700,000 bytes of data, we recommend that these

textures be used from floppy disk, rather than copied to the system's hard disk.

Additional textures are available from CHYRON. Please contact your sales representative.

7.3 Textures and Machine Font Size

When applying textures to an entire font, keep in mind that texturing greatly increases the size of the machine font. It is not possible to accurately predict the size of the converted machine font, since the size is determined both by the type of font and the type of texture. However, the size of a textured font can be between 3 and 15 times larger than the same font without texture. With this in mind, it may be wiser to use textures on words created by Word Create. Or, if creating textured characters larger than 90 scanlines, you should select out only those characters you wish to use in your character placement table.

7.4 Texture Applications: Characters & Words

Certain types of textures have a continuous flow, which makes these textures appear more natural when applied to an entire word rather than to individual characters. This flow becomes most apparent when the texture has an angular pattern where the pattern should appear to flow from one character to the next. Therefore, for many texture applications, it is better to use words rather than individual characters.

7.5 Texture Subpalettes and Samples

Included on the diskette with the texture data is a message in the SCRIBE directory at message ID 0 which provides you with a representation of the texture placed on a character or word, along with a subpalette that we recommend you use with the particular texture. This subpalette will be loaded into the WHITE key subpalette.

To view the sample message of a texture, insert the texture floppy disk into a floppy disk drive, and change the active message directory to:

[1] SCRIBE

Then, change the drive selection to that disk drive and perform a CNTL - READ operation to read the subpalette.

If you manually load the subpalette in Message Compose, a subpalette that ramps from black to white and includes the desired color generally

provides the best results. In Message Compose, the BLACK color key's subpalette defaults to a gray scale ranging from black to white. This subpalette provides the most accurate view of the texture.

For additional information about SCRIBE subpalettes, please refer to the SCRIBE Operator Manual, Part III, paragraph 3.3.3.

Section 8

Conversion Error Log Operation

8.1 General

This section describes the Conversion Error Log function. The conversion error log is a record of errors that occur during the font conversion process. Since the conversion process is designed to operate without operator intervention, the Conversion Error Log allows the operator to review any errors that may have occurred during conversion. If error(s) occurred during the conversion process, the system will prompt with:

ERROR(S) DURING CONVERSION - DISPLAY ERROR LOG

Please note: The Conversion Error Log must be displayed before performing more conversions or pressing the MODE SLCT key. Starting any other process will clear the Conversion Error Log of any messages; therefore, we recommend that you view this log before leaving Advanced Font Create Utility.

8.2 Recalling the Conversion Error Log

To recall the Conversion Error Log, enter "R" from the Advanced Font Create Utility main menu. The system will respond with Figure 8-1:

Conversion Error Log

10 - NOTE: Edge Will Not Be Added to Multicolored Character
10 - Disk Error - File 5284
24 - Font Size Too Large

Press NEWLINE for next page - CNTL to exit

Figure 8-1. Conversion Error Log Display

8.3 Conversion Error Log Format

The format used in the Conversion Error Log is as follows:

XX - (error message)

The number (XX) represents the line number from the Conversion List, and the error message describes the nature of the error. For more information about the particular message, please refer to Appendix A, Error Responses.

Appendix A

Error Responses

A.1 General

This section contains all system error responses that may be encountered during Advanced Font Create operation. These responses are organized by function in alphabetical order, meaning that all error responses associated with a certain function are grouped together.

The terminology used in error responses is as follows:

NOTE: The particular character was converted, although it may appear differently than specified.

CAUTION: The particular character was not converted due to the error. The remaining characters in the font were, however, converted.

Any Other Message: The entire font was not converted due to the error.

A.2 Checking Conversion List Error Responses

These error messages may occur during the system's check-through of the Conversion List:

CANNOT FIND 3D MODEL FILE XXXX	The system could not locate the 3D model you specified. Check the ID number and the drive selection.
---------------------------------------	--

CANNOT FIND MASTER FONT ID XXXX	The system could not locate the master font ID you specified. Check the ID number and the drive selection.
--	--

CANNOT FIND MASTER FONT ID XXXX IN WORD XXXX	The system could not locate the master font(s) specified in the word to be converted. Please note
---	---

that the master fonts for a word must be on the same disk as the word itself!

Check the ID numbers and the drive selection carefully.

CANNOT FIND TEXTURE FILE XXXX

The system could not locate the texture file you specified. Check the ID number and the drive selection.

CANNOT FIND WORD ID XXXX

The system could not locate the word file you specified. Check the ID number and the drive selection.

CANNOT MAP TEXTURES TO 3D MODELS

The system cannot map a texture to a 3D model. Check the conversion list, and change it if necessary.

CANNOT SELECT DRIVE XX

Check the drive selection: the drive may be open, or the drive specified may not be on the system.

CANNOT SPECIFY EDGE WITH 3D MODEL

The system cannot map an edge onto a 3D model. Check the conversion list, and change it if necessary.

DUPLICATE MACHINE FONT ID XXXX

This message is displayed when you specify the same machine font ID in more than one line of the conversion list. Check the conversion list, and change it if necessary.

**MACHINE FONT ID XXXX
ALREADY EXISTS**

You specified a machine font ID number that already exists on the selected drive. Check the

NO CHAR SET SPECIFIED

conversion list, and change it if necessary.

You left the CHAR SET field blank on one or more lines in the conversion list.

NO EDGE DIRECTION SPECIFIED

You must specify edge direction if drop shadow or offset was specified in the **EDGE DIRECTION** field on the conversion list.

NO EDGE SIZE SPECIFIED

You must specify an edge size, unless "NO EDGE" was specified.

NO MACHINE FONT DRIVE SPECIFIED

You must specify drive selection for the machine font. Check the conversion list, and change it if necessary.

NO MASTER FONT DRIVE SPECIFIED

You must specify drive selection for the master font. Check the conversion list, and change it if necessary.

A.3 Font Conversion Error Responses

The following error messages may occur during the font conversion process. Any message is displayed on the Prompts monitor as it is encountered, and will also be recorded in the Conversion Error Log for later recall.

CANNOT LOAD 3D MODELING SOFTWARE

The system cannot perform the load correctly. Make sure that this software is on the same disk as the Advanced Font Utility software. Check your drive selection and retry.

**CANNOT LOAD 3D RENDERING
SOFTWARE**

The system cannot perform the load correctly. Make sure that this software is on the same disk as the Advanced Font Utility software. Check your drive selection and retry.

**CANNOT LOAD TEXTURE CREATE
SOFTWARE**

The system cannot perform the load correctly. Make sure that this software is on the same disk as the Advanced Font Utility software. Check your drive selection and retry.

**CANNOT LOAD WORD COMPOSE
SOFTWARE**

The system cannot perform the load correctly. Make sure that this software is on the same disk as the Advanced Font Utility software. Check your drive selection and retry.

**CANNOT OPEN MASTER FONT
FILE XXXX**

The system attempted to open the specified master font, but could not. Check that the drive containing the master font is operating correctly.

CANNOT READ PLACEMENT TABLE X

The system attempted to open the specified placement table, but could not. Check that the drive containing the placement table is operating correctly and that the placement table is stored on the same drive as the requested machine font.

CANNOT READ TEXTURE FILE XXXX

The system attempted to open the specified texture file, but could not. Check that the drive containing the texture file is operating correctly.

**CAUTION: LOGO TOO WIDE FOR
SELECTED SCANLINE HEIGHT**

This error will occur if you specify a logo to be converted at a height such that the final character will exceed the em-square for the character. If this logo is in a font, it will not be converted, then processing will continue with the next character, word, or logo in the font.

**CAUTION: SCANLINE SIZE TOO
LARGE FOR CHARACTER**

At the size specified for this character, too many points were generated. Try converting at a smaller scanline size.

CHARACTER DOES NOT EXIST

A word compose file specified a character that does not exist within the selected master font.

COORDINATE OUT OF RANGE

This error will occur when one or more pixels of a character's outline falls outside the em-square.

DISK ERROR - FILE XXXX

A disk error occurred during the conversion. Contact an authorized technician or CHYRON Customer Service for further assistance.

ERROR CODE - XXXX

A software error occurred during the conversion. Contact an authorized technician or CHYRON

ERROR IN CHARACTER'S DEFINITION DATA	Customer Service for further assistance. The system encountered an error in the data describing the character's outline. (This error may be caused by a disk error).
ERROR IN DEFINING 3D	The system encountered an error in defining the 3D model for a character, word, or logo.
ERROR IN READING KERNING DATA	The system encountered an error while performing a character kerning procedure. Check the validity of your disk data before proceeding.
ERROR IN UNDERLINE PROCESSING	The system encountered an error while processing an underline character.
FONT SIZE TOO LARGE	This error occurs when the sum of character size plus edge size exceeds the maximum allowable size for the character, <u>OR</u>, a word at the requested height exceeds the maximum allowable width.
FONT XXXX DOES NOT EXIST	Check the Master Font ID field for that conversion list item, then retry.
INVALID TEXTURE FILE VERSION NUMBER	This error indicates a mismatch between the software versions of the texture and the Advanced Font Create Utility. Contact CHYRON Customer Service for assistance.

INVALID 3D FILE VERSION NUMBER

This error indicates a mismatch between the software versions of the 3D file and the Advanced Font Create Utility. Contact CHYRON Customer Service for assistance.

INVALID MASTER FONT VERSION NUMBER

This error message indicates an error in the master font. This error shouldn't occur unless the disk is corrupted. This error is non-recoverable, and the font will not be converted.

INVALID WORD FILE VERSION NUMBER

This error indicates a mismatch between the software versions of the word file and the Advanced Font Create Utility. Contact CHYRON Customer Service for assistance.

NOTE: CHARACTER HAS BEEN CLIPPED

The size specified during conversion of a 3D word or logo has caused the word or logo to exceed the maximum allowable size. Some of the word or logo has been clipped to compensate, therefore it is not complete.

NOTE: EDGE WILL NOT BE ADDED TO MULTI-COLORED LOGO

When system is converting a font containing logos, no edge will be applied to a multicolored logo even if one is specified. Multicolored logos will be converted without edges but monochrome logos

**NOTE: MULTI-COLORED LOGO
MAY BE INCOMPLETE IN 3D**

**NOTE: TEXTURE IS NOT MAPPED TO
MULTI-COLORED LOGO**

**NUMBER OF POINTS IN CHARACTER
EXCEEDS LIMIT**

MASTER FONT NON EXISTENT

TEXTURE SIZE TOO LARGE

within the font will have edges applied.

When system is converting a font containing logos, 3D model will not be applied correctly to a multicolored logo even if texture is specified.

When system is converting a font containing logos, texture will not be applied to a multi-colored logo even if texture is specified.

This error indicates a problem within your master font. Contact CHYRON Customer Service for further assistance.

Check the master font ID field for that conversion list item, then rétry. This error could occur if the master font is on a floppy disk that was inserted correctly when conversion list was checked, but was subsequently removed.

When a texture is not rotated, characters can be converted at sizes up to 400 scanlines. However, when the texture is rotated, the maximum size for characters decreases slightly. This error message will occur if the maximum character size for the specified texture rotation has been exceeded. If converting logos, conversion will continue with the next

**TOO MANY BOUNDARY PIXELS
FOR FONT MEMORY**

logo in the font. If converting a font containing characters or words, *no* conversion will take place. To recover, reduce the desired character size or change the texture rotation.

The number of pixels the boundaries of a character or logo passes through depends on the requested size and the complexity of the character. There is a limit to the number of boundary pixels allowed depending on the amount of font memory in your system. If you encounter this message consistently, contact CHYRON Customer Service.

**CAUTION: TOO MANY POINTS
GENERATED ON EDGE**

Arcs and curves used in a character's definition are broken down into small lines, defined by their endpoints. There is no limit to the number of such lines in a character, but there is a limit of 4,000 around the character border or drop shadow. The number of lines generated depends on the complexity of the character (based on the number of arcs/curves and the size requested). If the number of arcs/curves exceeds the limit, the error message is displayed then processing continues with the next character.

A.4 Word Compose Mode Error Responses

The following error messages may occur during Word Compose operation. Any message is displayed on the Prompts monitor as it is encountered.

ANGLE MUST BE LESS
THAN 75°

If angle specified for character shear is larger than 75°, this error message will be displayed.

UNDEFINED CHARACTER XXXX
FONT XXXX

The system could not locate the character you specified from the selected font during a READ function. Check the character ID number to be sure that this character is included in the font, and try again.

CANNOT FIND FONT XXXX

The system could not locate the font you specified on the selected drive during a word read function. Check the font ID number, and also the drive selection.

CHARACTER EXCEEDS LIMIT

This error message will occur if the size of a character after it is typed, sheared, scaled, or rotated exceeds maximum screen display area. Try a smaller size, less rotation, or a smaller scaling factor.

CURSOR NOT ON CHARACTER

This error response occurs when you attempt to scale, shear or rotate a character

**SCANLINE SIZE TOO
LARGE FOR CHARACTER**

when the cursor is not over the character.

This error message will occur if the number of points generated at the desired view size exceeds the font memory allocated. Try viewing character/word/logo at a smaller size or with less rotation.

MAXIMUM CHARACTERS EXCEEDED

The maximum number of characters per word is 40. This error response will be displayed if you exceed this limit.

**MAXIMUM POINTS EXCEEDED -
CHAR XXXX FONT XXXX**

This error message will occur if you attempt to read a character that is too large or complex. Try a smaller size or a less complex character.

UNDEFINED CHARACTER

This error message is displayed during the Font Select operation, and will occur if the character you specified does not exist in the selected master font. To recover, first check your character and master font selection, then check your disk selection.

UNDEFINED FONT

Word/Font does not exist. This message is displayed during the font select function.

WORD ID MUST BE LESS THAN 1000

The ID numbers allowable for Words range between 0 and 999. This message will occur if you attempt to record or read a Word ID greater than 999.

WORD SIZE EXCEEDS LIMIT

This message will occur during word record if a character is beyond the maximum screen display area.

X-SCALE MUST BE LARGER THAN 1

This error message will be displayed if the percentage of X-Scale entered is less than 1%.

Y-SCALE MUST BE LARGER THAN 1

This error message will be displayed if the percentage of Y-Scale entered is less than 1%.

A.5 Edit 3D Model Error Responses

The following error messages may occur during Edit 3D Model operation. Any message is displayed on the Prompts monitor as it is encountered.

CANNOT FIND FONT

This message is displayed during 3D View and Read 3D Model functions if the master font or word does not exist.

UNDEFINED CHARACTER

This error message is displayed during 3D View function if a character from a master font does not exist.

**SCANLINE SIZE TOO
LARGE FOR CHARACTER**

This error message will be displayed if the number of points generated at the desired view size exceeds the font memory allocated. Try viewing the character/word/logo at a smaller size.

FILE ID MUST BE LESS THAN 1000

This error message is displayed during READ and RECORD 3D Model functions, if the file ID used is larger than 1000.

INVALID FILE VERSION NUMBER

This error message may be displayed during READ/RECORD 3D Model function, if the version of software used for creating the 3D Model is incompatible with the version of software used in the machine. For further assistance, contact CHYRON Customer Service.